

**CHANGES in REGULATIONS,
ORDERS, ADVISORY
CIRCULARS, and OTHER
GUIDANCE MATERIAL**

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Overview

- **Regulatory Process/Information**
- **Final Rules/NPRMs**
- **Orders**
- **Notices**
- **Advisory Circulars**
- **Policy Memos**
- **Technical Standard Orders (TSOs)**
- **Technical Reports**

Regulatory Process

- **Aviation Rulemaking Advisory Committee (ARAC)**
 - ARAC Charter, interested parties to develop the new regulations or changes to existing regulations
 - Current activities on ARAC bulletin board
 - Website at <http://armbbs.faa.gov>
 - Bulletin board provides
 - News
 - Listing of meetings
 - Rulemaking Information
 - Committee information
 - ARAC procedures
 - ARAC Charter

Current ARAC Meetings

- Aviation Rulemaking Advisory Committee Meeting on **Transport Airplane and Engine** Issues
 - Fuel Tank Inerting Working Group - Recently Formed
- Aviation Rulemaking Advisory Committee Meeting on **Emergency Evacuation** Issues
- Aviation Rulemaking Advisory Committee Meeting on **Aircraft Certification Procedures** Issues
- Aviation Rulemaking Advisory Committee to Discuss **Rotocraft** Issues

Regulatory Information

- **FAA Regulatory Web Site**
 - <http://www.faa.gov/avr/arm/nprm/nprm.htm>
 - Web site is current, updated as regulatory actions occur
 - Provides final rule and NPRM
 - Contain regulatory information from 1996 to current
- **FAA Regulations**
 - Aircraft Certification Home Page -
<http://www.faa.gov/avr/air/airhome.htm>
 - Rotorcraft Directorate Home Page -
<http://www.faa.gov/avr/air/asw/rotor.htm>
 - Designee and Delegation Web Page -
 - <http://av-info.faa.gov/dst/>

Part 21 Final Rule with Request for Comments

- **All New Rules and NPRMs are Available at FAA website,**
<http://www.faa.gov/avr/arm/nprm/nprm.htm>
- **Amdt. No. 21-77, Revision of Procedural Requirements for Changed Products,** issued May 31, 2000
 - Comments due 8/7/2000
 - Revises 21.19, 21.101, and 21.115
 - Compliance Dates
 - 12/10/2001 for Transport and Restricted Airplanes
 - 12/9/2002 for all other Category airplanes and engines

Part 25 Final Rules

- **Amdt. No. 25-99, Revision of Procedural Requirements for Changed Products**, effective 6/7/2000
 - Revises 25.2 to incorporate reference to FAR 21.101(a)
- **Amdt. 25-98, Revision of Gate Requirements for High-Lift Device Controls**, effective 3/10/99
 - Revise the requirements concerning gated positions on the control used by the pilot to select the position of an airplane's high-lift devices.
 - Harmonizes these standards with those being adopted by the JAA.

Part 27 Final Rule

- **Amdt. No. 27-37, Normal Category Rotorcraft Maximum Weight and Passenger Seat Limitation**, effective October 18, 1999
 - Increases the maximum weight limit from 6,000 to 7,000 pounds and adds a passenger seat limitation of nine.
 - These regulations are revised, Section 27.1, .2, 610, .806, .807, .1027, .1185, .1187, .1305, and .1337.

Parts 27 and 29 Final Rule

- **Amdt. No's. 27-38 and 29-45, Parts 27 and 29 Harmonization of Critical Parts Rotorcraft Regulations**, effective October 26, 1999
 - This amendment defines critical parts. This document also requires a critical parts list with procedures to control the design, substantiation, manufacture, maintenance, and modification of critical parts.
- **Amdt. No.'s 27-36 and 29-43, Rotorcraft Load Combination(RLC) Safety Requirements**, effective October 5, 1999
 - Revises the safety requirements for RLC's and provide an increased level of safety in the carriage of humans. (FAR 27.25, 27.865, 29.25, 29.865)
 - Provides harmonized international standard.

Part 29 Final Rule with Request for Comments

- **Amdt. No. 29-44, Transport Category Rotorcraft Performance**, effective November 17, 1999
 - Makes several nonsubstantive clarifications and corrects various nonsubstantive errors in the performance requirement sections. Corrects final rule published in May 10, 1996.

Part 34 Final Rule

- **Amdt. 34-3, Emission Standards for Turbine Engine Powered Airplanes**, effective February 3, 1999
 - Revises the emission standards for turbine engine powered airplanes to incorporate the current standards of the ICAO for gaseous emissions of oxides of nitrogen and carbon monoxide.

Part 36 Final Rule

- **Amdt. 36-22, 14 CFR Part 36 Noise Certification Standards for Propeller-Driven Small Airplanes**, effective December 13, 1999
 - Harmonization of the noise certification standards in order to simplify airworthiness approvals for import and export purposes

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New Regulations & Update

SFAR 36

- **SFAR 36-7 14 CFR Parts 121, 135, and 145 Special Federal Aviation Regulation No. 36, Development of Major Repair Data; Issued January 6, 1999 and Correction issued on January 26, 1999, effective January 23, 1999**
- Extends the termination date of, and amends Special Federal Aviation Regulation (SFAR) No. 36, which allows authorized certificate holders (domestic repair stations, and carriers, air taxi operators of large aircraft, and commercial operators of large aircraft) to approve aircraft products and articles for return to service after accomplishing major repairs using data developed by the holder that have not been directly approved by the FAA. (Currently, more than 25 air carrier and domestic repair station certificate holders have SFAR 36 authorizations)

Final Rule - Operating Rules

- **Amdts. 91-263, 121-273, 135-75, Terrain Awareness and Warning Systems, effective date 3/29/2001**
 - Adds Sections 91.223, 121.354, and 135.154
 - Requires all US Registered turbine powered airplanes with 6 passenger or more have a FAA-approved terrain awareness and warning system
- **Amdt. 91-261, Reduced Vertical Separation Minimum (RVSM), effective 2/24/2000**
 - Reduces vertical separation from 2000 feet to 1000 feet at Flight levels between 29000 and 41000 feet.
 - Must meet more stringent altimeter and autopilot performance requirements.

Notice - Review of Regulations

- **Review of Regulations now in effect, issued July 7, 2000**
 - Invites the public to tell the FAA which regulations now in effect you believe the FAA should amend, eliminate, or simplify.
 - Comment period closed October 11, 2000
 - Contact: Gerri Robinson, ARM-24, (202) 267-9678

NPRM - Aging Airplane Safety Parts 119, 121, 135, 183

- **Aging Airplane Program for multiengine airplanes operated under Parts 119 and 135**
 - Aging Aircraft Safety Act of 1991
 - proposes damage-tolerance analysis and inspection techniques be applied to older airplane structures that were certificated before such techniques were available
 - Allows DARs to conduct certain record reviews and inspections
 - Withdraws NPRM 93-5
 - Comment period closed October 18, 1999

NPRM Part 21, 25, 91, 121, 125, and 129

- **Transport Airplane Fuel Tank System Design Review, Flammability Reduction, and Maintenance and Inspection Requirements; Issued October 29, 1999 and February 16, 2000**
 - Would require design approval holders of certain turbine-powered transport category airplanes to submit substantiation to the FAA that the design of the fuel tank system of previously certificated airplanes precludes the existence of ignition sources within the airplane fuel tank and would require certain operators of those airplanes to incorporate FAA-approved fuel tank system maintenance and inspection instructions into their current maintenance or inspection program.
 - Comment period closed March 27, 2000

NPRM-Part 36 Noise Certification Standards for Propeller-Driven Small Airplanes

- The FAA is proposing changes to the noise certification standards for propeller-driven small airplanes.
- Harmonize the FAR and JAR requirements for propeller-driven small airplanes.
- Comment Period Closed
- Mehmet Marsan, AEE, (202) 267-7703.

NPRM - Part 25
Braking Systems Airworthiness
Standards

- Harmonizes US Standards with European Standards (JAA)
- Proposed revisions to 25.731, wheels, and 25.735, brakes and braking systems.
- Comment Period Closed November 8, 1999.
- Mahinder Wahi, ANM-112, (425) 227-2142

NPRM - Part 25
Landing Gear Shock Absorption
Test Requirements

- Harmonizes US Standards with European Standards (JAA)
- Proposed revisions to 25.473, landing load conditions and assumptions, and 25.723, shock absorption tests.
- Comment Period Closed October 18, 1999.
- James Haynes, ANM-115, (425) 227-2131

NPRM - Part 25 Fire Protection Requirements for Powerplant Installations

- Harmonizes US Standards with European Standards (JAA)
- Proposed revisions to 25.1183, Flammable fluid-carrying components.
- Comment Period Closed August 11, 2000.
- James Haynes, ANM-115, (425) 227-2131

NPRM Revisions to Digital Flight Data Recorder

- **Parts 91, 121, and 125 Revisions to Digital Flight Data Recorder Regulations for Boeing 737 Airplanes and for Part 125 Operations**
- Proposes to amend the digital flight data recorder (DFDR) regulations for transport category airplanes to add a requirement for all Boeing 737 (B-737) series airplanes to record additional flight data parameters
- Proposes a change to the flight data recorder requirements of part 125 that would affect all aircraft operated under that part or under deviation from that part.
 - Comments period closed December 20, 1999.
 - Contact George Kaseote, (202) 267-8541

Orders/Notices

- **Orders are permanent directives on individual subjects or programs that remain in effect until specifically cancelled.**
- **Notices are temporary directives on individual subjects that remain in effect for 12 months or less. They are self canceling and if they are intended for long term guidance they will become the subject of an FAA order. Cancelled notices are retained for historical reference purposes. Always coordinate with your FAA office before relying on a cancelled notice for guidance.**

Orders Issued/Revised

- **Available at <http://av-info.faa.gov/dst/> - Reference Library**
- **8100.8 - Designee Management Handbook - 11/20/98**
- **8110.4B, Type Certification Handbook - 4/24/2000**
- **8110.37C - DER Handbook - 9/30/98**
- **8110.42A - Parts Manufacturer Approval Procedures - 3/31/99**
 - New format for PMA supplement

Notices Issued

- **Available at <http://av-info.faa.gov/dst/> - Reference Library**
- **Notice 8110.71-Guidance for the Certification of Aircraft Operating in High Intensity Radiated Field Environments, 4/2/98, cancellation date 4/2/99**
 - Provides requirements for HIRF certification until harmonized FAR/JAR rule is issued.
 - Requirements based on those adopted by the Electromagnetic Effects Harmonization Working Group ARAC
- **Notice 8110.72 - Structural Designated Engineering Representatives Approvals of Alternative Methods of Compliance to Airworthiness Directives and AD Mandated Repairs, 3/30/98, cancellation date 3/30/99**
 - Allows certain manufacturer's structural DERs to approve alternate methods of compliance

Notices Issued

- **Notice 8110.73 - Implementation of TSO for fasteners, bearings, and seals, 6/23/98, cancellation date 6/23/99**
 - Provides guidance on the implementation plan for TSO-C148, aircraft mechanical fasteners, TSO-C149, aircraft bearings, and TSO-C150, aircraft seals.
- **Notice 8110.76 - DER to Designated Inspection Representative Notification Process, 9/25/98, cancellation date 9/25/99**
 - Allows DERs to process 8120-10, Request for Conformity, without ACO review
 - Must have coordinated up-front conformity plan that prescribes which RFCs may be processed without FAA involvement
 - Plan defines tracking and paperwork requirements and methods for resolving unsatisfactory findings

Notices Issued

- **Notice 8110.77 - Guidelines for the Approval of Field-Loadable Software, 11/18/98, cancellation date 11/18/99**
 - Applicable to TC, ATC, STC, TSO
 - Additional policy being developed to address PMA
 - Supplements DO-178B
 - www.faa.gov/avr/air/air100/sware/sware.htm
- **Notice 8110.78 - Guidelines for the Approval of Software Changes in Legacy Systems Using RTCA DO-178B, 12/7/98, cancellation date 12/7/99**
 - Clarifies requirements in 178B
 - Provides guidance on the application of DO-178B to software changes made to systems developed under 178 or 178A
 - Available at www.faa.gov/avr/air/air100/sware/sware.htm

Notices Issued

- **Notice 8110.79 - Guidelines for the Approval of Field-Loadable Software by Finding Identity through the Parts Manufacturer Approval Process, 2/22/99, cancellation date 2/22/00**
 - Provides guidelines for approving Field-Loadable software through PMA
 - Limited to identity with and without a licensing agreement
 - Does not cover test and computations
- **Notice 8110.81 - Guidelines for the Software Review Process, 3/19/99, cancellation date 3/19/00**
 - Objectives of the software review process
 - Interaction between the software review process and software life cycle
 - Additional considerations for the software review process
 - Preparing, conducting, and documenting the software review

Notices Issued

- **Notice 8110.80 - The FAA and Industry Guide to Product Certification, 2/26/99, cancellation date 2/26/00**
 - FAA/Industry Certification Process Improvement (CPI) process
 - Provides a structured approach to the project management of a certification program
 - Emphasis on upfront communication and planning
 - **Strongly encouraged** for TC programs and significant STC projects
- **CPI Guide - FAA and Industry Guide to Product Certification dated January 25, 1999**

Notices Issued

- **Notice 8110.82 - Guidelines for Applying the RTCA/DO-178B Level D Criteria to previously Developed software (PDS), 3/26/99, cancellation date 3/26/00**
 - Provides guidance for PDS that has been categorized to contribute to at most a minor failure condition on the aircraft.
- **Notice 8110.83 - Guidelines for the Qualification of Software tools Using RTCA/DO-178B, 4/5/99, cancellation date 4/5/00**
 - Provides guidance on Section 12.2 criteria of DO-178B for tool qualification

Notices Issued

- **Notice 8110.84 - Guidelines for the Approval of Airborne Systems and Equipment Containing User-Modifiable Software, 4/8/99, cancellation date 4/8/00**
 - Provides guidance for approval of software aspects of systems related to TC, STC, and TSOA.
 - Supplements DO-178B

Advisory Circulars Issued/Revised

- **Available at <http://av-info.faa.gov/dst/> - Reference Library**
- **183.29HH Consultant DER Directory, dated 3/1/00**
 - Provides listing of all consultant DERs
- **21-40 Application Guide for Obtaining a Supplemental Type Certificate, 5/6/98**
 - Provides information and guidance regarding procedures for obtaining a supplemental type certificate for typical modification projects.
- **23.1419-2A, Certification of Part 23 Airplanes for Flight in Icing Conditions.**
 - Provides guidance and information on compliance with the ice protection requirements of Part 23.

Advisory Circulars Issued/Revised

- **23.1311-1A - Installation of Electronic Displays in Part 23 Airplanes**
 - Acceptable means of showing compliance applicable to the installation of electronic displays in Part 23 airplanes
- **23.1309-1(C) - Equipment, Systems, and Installations in Part 23 Airplanes**
 - Provides guidance and information for an acceptable means for showing compliance with the requirements of Sec. 23.1309(a) and (b) (Amendment 23-49) for equipment, systems, and installations in Part 23 airplanes.
- **23-18, Installation of Terrain Awareness and Warning Systems (TAWS) Approved for Part 23 Airplanes (6/14/2000).**
- **23-16, Powerplant Guide for Certification of Part 23 Airplanes**

Advisory Circulars Issued/Revised

- **23-17 Systems and Equipment Guide for Certification of Part 23 Airplanes (4/25/2000)**
 - Provides methods acceptable for showing compliance with the provisions of subparts D and F of 14 CFR part 23 regarding the type certification requirements for transport airplane mechanical systems.
- **25-21, Certification of Transport Airplane Structure (9/1/99)**
 - Showing compliance with the provisions of subparts C and D of 14 CFR part 25 regarding the type certification requirements for transport airplane structure.]
- **25-22, Certification of Transport Airplane Mechanical Systems (3/14/2000)**
 - Provides methods acceptable for showing compliance with the provisions of subparts D and F of 14 CFR part 25 regarding the type certification requirements for transport airplane mechanical systems.
- **25-23, Airworthiness Criteria for the Installation Approval of a Terrain Awareness and Warning System (TAWS) Approved for Part 25 Airplanes (5/22/2000)**

Advisory Circulars Issued /Revised

- **25.1419-1, Certification of Transport Category Airplanes for Flight in Icing Conditions**
 - Airframe ice protection systems
- **27-1B, Certification of Normal Category Rotorcraft, 9/30/99**
 - Total revision of 27-1A, incorporates new material plus changes existing paragraphs
- **29-2C, Certification of Transport Category Rotorcraft, 9/30/99**
 - Total revision of 29-2B, incorporates new material plus changes existing paragraphs
- **33.78-1, Turbine Engine Power-Loss and Instability in Extreme Conditions of Rain and Hail**
- **33.4, Instructions for Continued Airworthiness, August 27, 1999**

Proposed/Draft Advisory Circulars

- **AC 91-MA**
 - Provides guidance for manufacturers and operators in developing continued structural integrity programs of small transport and commuter airplanes
- **AC120-xx**
 - Provides guidance to aging aircraft records review to satisfy the requirements of the Aging Airplane Safety final rule
- **25-XX, Certification of Transport Airplane Electrical Equipment Installations**
 - Guidance on compliance with the certification requirements for transport airplane electrical systems and equipment installations.

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New Regulations & Update

Proposed Advisory Circulars/Revisions from FAA Designee Website

- Available at <http://www.faa.gov/avr/air/acs/draftach.htm>
 - Check website for comment period date
- **39-XX, Continued Airworthiness Assessment of Powerplant and Auxiliary Power Unit Installations on Transport Category Airplanes**
- **33.4-2, Instructions for Continued Airworthiness: Focused Inspection of Safety Critical Turbine Engine Parts At Piece -Part Opportunity**
- **33.28-1, Compliance Criteria for 14CFR33.28, Aircraft Engines, Electrical, and Electronic Engine Control Systems**
- **23-XX-28, Airframe Guide for Certification of Part 23 Airplanes**
- **20-XX, Turbojet, Turboprop & Turbofan Engine Induction System Icing**

Proposed Advisory Circulars/Revisions from FAA Designee Website

- **20-XX, Recommended Method for FAA Approval of Aircraft Fire Extinguishing System Components**
- **25.335-1, Design Dive Speed**
- **25.905-X, Minimizing the Hazards from Propeller Blade and Hub**
- **33.76-1, Bird Ingestion Certification Standards**
- **25-XX, Sustained Engine Imbalance**
- **25-XX, Transport Airplane Propulsion Engine and Auxiliary Power Unit Installation Certification Handbook**

Proposed Advisory Circulars/Revisions from FAA Designee Website

- **25.981-1X, Fuel Tank Ignition Source Prevention Guidelines**
- **25.981-2X, Fuel Tank Flammability Minimization**
- **25-17A, Transport Airplane Cabin Interiors Crashworthiness Handbook**

Policy Memorandums on the Designee Website

- **Available at <http://av-info.faa.gov/dst/> - Reference Library**
- **AIR-100 Memo 00-01, Proper DAS Program Notification (Letter of Intent) and FAA Response, dated 3/10/00**
- **AIR-100 Memo 00-02, DAS Certification Activities Performed on Foreign Registered Test Articles and/or at Offsite Locations, dated 3/13/00**
- **AIR-200/AIR-100 Memo 99-09, Guidance for Developing Undue Burden and No Undue burden Papers Under 14 CFR Part 21**
 - Includes Decision Paper Forms for TC and STC Projects
- **AIR/AFS Policy Memorandum 2000-03, Issuance of a Special Airworthiness Certificate in the Experimental Category for Show Compliance Flight Testing 3/28/2000**

TSO's and Proposed TSO's

- Available at <http://www.faa.gov/avr/air/AIR100/tsohome.htm>
 - Current and Proposed
- Proposed TSO-C77b, Gas Turbine Auxiliary Power Units
- Proposed TSO-C140: Aerospace Fuel, Engine Oil, and Hydraulic Fluid Hose Assemblies; January 4, 2000
- Proposed Technical Standard Order (TSO)--C135, Transport Airplane Wheels and Wheel and Brake Assemblies ; August 10, 1999

Technical Reports

- Propulsion System and Auxiliary Power Unit (APU) Related Aircraft Safety Hazards; November 22, 1999